SYSTEM SOFTWARE RESEARCH FOR EXTREME-SCALE COMPUTING

MARCH 22, 2010

10:00 A.M.

Bldg. 4500JN

Weinberg Auditorium

HOST: ASHLEY BARKER (ASHLEY@ORNL.GOV

Note: If you would like to request a meeting with the visitor, please contact Sherry Hempfling (hgv@ornl.gov)

Ron Oldfield, Ph.D.

Scalable System Software
Sandia National Laboratories
PO Box 5800
Albuquerque, NM 87185-1319
Office: (505) 284-9153
Cell: (505) 450-8145
email: raoldfi@sandia.gov

Abstract:
Sandia recently received an INCITE award to leverage the Leadership Computing Facility systems to improve and evaluate ongoing system software efforts at SNL. This talk will provide a brief overview of our research objectives as they relate to the INCITE allocation. In particular, I will discuss plans for evaluating research related to operating system virtualization, operating system interference, resilience, scalable I/O, power utilization, and scalable debugging.

Bio:
Ron A. Oldfield is a senior member of the technical staff at Sandia National Laboratories in Albuquerque, NM. He received the B.Sc. in computer science from the University of New Mexico in 1993. From 1993 to 1997, he worked in the computational sciences department of Sandia National Laboratories, where he specialized in seismic research and parallel I/O. He was the primary developer for the GONII-SSD (Gas and Oil National Information Infrastructure—Synthetic Seismic Dataset) project and a co-developer for the R&D 100 award winning project "Salvo", a project to develop a 3D finite-difference prestack-depth migration algorithm for massively parallel architectures. From 1997 to 2003 he attended graduate school at Dartmouth college and received his Ph.D. in June, 2003. In September of 2003, he returned to Sandia to work in the Scalable Computing Systems department. He currently leads a number of I/O, fault-tolerance, and systems simulation projects. His research interests include parallel and distributed computing, parallel I/O, fault tolerance, and performance modeling.

Host: Ashley Barker (Ashley@ornl.gov), 574-1841